



Digital Value Chains for a Sustainable Small-Scale Agriculture




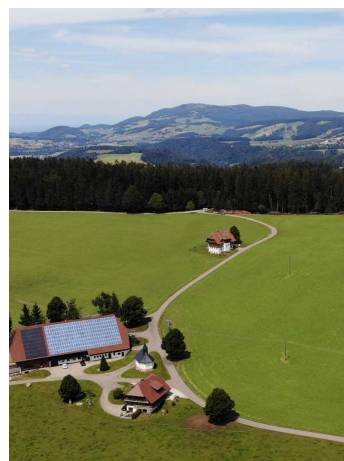
UNIVERSITY OF HOHENHEIM




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Exemplary on-farm research of region-, period- and sward-specific grassland yield prediction using geoprocessing methods

30 June 2022 | Christoph Stumpe, University of Hohenheim


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EGF 2022

29th GENERAL MEETING
GRASSLAND AT THE HEART OF CIRCULAR AND SUSTAINABLE FOOD SYSTEMS
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Initial situation and problem




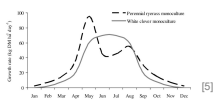
- farmers suffer from inaccurate and imprecise yield prediction
- one potential tool is the rising plate meter
- prediction is influenced by:
 1. region

 [1]
 2. sward type

 [2]
 3. measurement date

 [3]

 [4]

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Materials and methods

- on-farm research at four organic test farms in the Black Forest
- RPM measurements and cutting of samples for dry matter yield determination

- samples are divided depending on
 1. **sward type** (*grass-rich, balanced, clover- and herb-rich*)
 2. **growing period** (*1st period, 2nd period, 3rd period*)
- nine specific prediction equations derived for this region



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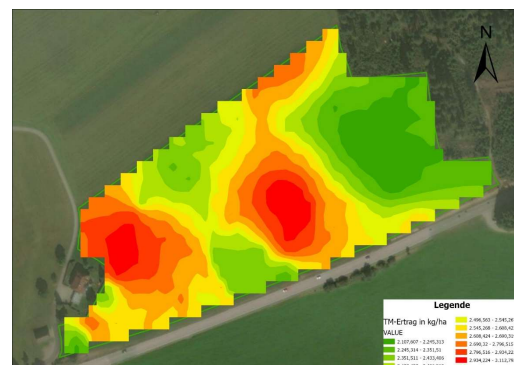


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Results and conclusion

- on-farm research is necessary to develop region-, period- and sward-specific prediction equations
- prediction equations are stored in a database
- geoprocessing is useful to apply specific prediction equations
- site-specific management can be implemented based on yield maps



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literature

- [1] unesco.de
- [2] nwzonline.de
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- [5] Paul Phelan; James Humphreys; Imelda Casey; Dr Eddy Fitzgerald: Aspects of grazing management to improve productivity and persistence of white clover in Irish grassland. Unpublished 2013, DOI: 10.13140/2.1.4391.4240

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